

REMARKS

Claims 9 and 10 are pending in this application.

Claims 9 and 10 are rejected under 35 U.S.C. §103(a) as being unpatentable over Rosset (U.S. Patent No. 3,375,288). This rejection is respectfully traversed.

Independent claim 9 recites a catalytic process for the dehydrogenation of an organic compound, the process comprising contacting the organic compound under dehydrogenation conditions with a supported catalyst consisting of nickel as the active catalytic component promoted with silver or gold, the silver or gold being present in an amount between 0.001% and 30% by weight calculated on the amount of nickel in the catalyst. According to an embodiment of the invention (set forth in claim 10), the support may be alumina, titania or a magnesium aluminum spinel.

Rosset discloses a catalytic process for the dehydrogenation of a hydrocarbon. The dehydrogenation reaction is carried out in a reactor comprising a bundle of thin-walled silver tubes mounted within a single outer tube or shell. The interior of the inner tubes may be the dehydrogenation zone and the annular space between the tubes may be the oxygen supply zone, or the interior of the inner tubes may be the oxygen supply zone and the annular space between the tubes may serve as the dehydrogenation zone (col. 1, lines 12 and 13; and lines 51 to 71). The dehydrogenation catalyst used in the reactor may be alumina, chromia-alumina, chromia-magnesia, chromia-beryllia-alumina, ferria-alumina, ferria-magnesia, platinum group metals in general, particularly platinum-alumina and nickel oxide-alumina, oxides of strontium, barium and molybdenum, ortho-phosphoric acid, various alkali or alkaline earth metals, cupric oxide in combination with a stabilizer such as an oxide of silver, zinc, cadmium, cobalt or nickel. Preferred catalysts include chromia-alumina, ferria-alumina, and chromia-beryllia-alumina (col. 2, lines 9 to 22). Chromia-alumina, and ferria-chromia-K₂CO₃ are used in the examples.

The subject matter of claims 9 and 10 would not have been obvious over Rosset. In the June 10, 2008 Office Action, the examiner asserts that Rosset discloses a catalytic process for the

dehydrogenation of an organic compound in which a supported catalyst consisting of nickel as the active catalytic compound promoted with silver is used. Applicants disagree with the examiner's assertion. Rosset merely teaches the use of nickel oxide-alumina, or a catalyst containing other components in combination with an oxide of nickel. Rosset does not teach or suggest any catalyst which consists of nickel promoted with silver or gold.

As detailed in the specification of the present application (page 3, lines 18 to 21; and page 5, lines 11 to 13), the nickel is used as metallic (pure) nickel and not as a nickel compound. Nickel oxide is activated by reduction with hydrogen to obtain the active catalyst (see Example 1). Consequently, the claimed process is neither suggested by nor rendered obvious over Rosset.

Moreover, the object of the claimed invention is different from that of Rosset. The crux of the claimed invention is to provide a catalytic process in which a modified nickel catalyst (which is more suitable for use in a dehydrogenation reaction than a pure nickel catalyst) is used. On the other hand, the crux of Rosset is a dehydrogenation process that can be conducted at lower dehydrogenation temperatures. For at least these reasons, the Office Action fails to establish a *prima facie* case of obviousness, and withdrawal of the rejection of claims 9 and 10 is respectfully requested.

Allowance of all pending claims is solicited.

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